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(54) OPERATION PERIOD ADAPTIVE TYPE DATA OUTPUT BUFFER

to the output terminal.

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(57) Abstract:

PROBLEM TO BE SOLVED: To satisfy simultaneously improvement of a noise margin in a low frequency and high speed access in a high frequency by selecting automatically an output driver having smaller size than the size of an output driver required in a high frequency when the device is operated in a low frequency.

SOLUTION: When an operation period is shorter than a setting value, a first control signal (fast) becomes active by an operation period detecting means 11, a data signal is applied to the gates of first pull-up and pull-down transistors (N12, N14) having large size respectively through NAND gates 13, 15 and inverters 17, 19, and thereby, the data signal is outputted quickly to an output terminal. On the other hand, when the operation period is longer than the setting value, a second control signal (slow) becomes active, a data signal is applied to the gates of second pull-up and pull-down transistors (N11, N13) having small size respectively and thereby, the data signal is outputted

